

Amendments to the Claims

The following listing of the claims replaces all previous amendments and listings of the claims.

1.-16. (Canceled)

17. (Currently Amended) Bioreactor for cultivating organic material by a nutrient medium, which can be put into a flow, comprising:

~~a housing;~~

~~a receiving device arranged in the housing, which has a receiving space for the organic material that can be flowed through by the nutrient medium;~~

a cell comprising:

first, second, and third carrier plates having predetermined thicknesses disposed between top and bottom covers;

~~at least two partition wall elements, which enclose the receiving space and each having a membrane, which is~~ membranes configured to be permeable to the ~~a~~ nutrient medium and ~~are~~ substantially impermeable to the an organic material cultivated in the cell, the two partition wall elements disposed in the first and third carrier plates; and

a carrier element, arranged in the receiving space, which is configured to be permeable to the nutrient medium and is configured as a fabric for an to permit adhesion of the organic material thereto, the carrier element disposed in the second carrier plate between the first and third carrier plates;

wherein

~~the housing is constructed as a flat cell having annular carrier plates,~~

~~the partition wall elements have a supporting fabric, to which the membrane is applied, and~~

~~both the supporting fabric with the applied membrane and the fabric of the carrier element are each mounted in an annular carrier plate.~~

18. (Currently Amended) Bioreactor according to claim 17, wherein the carrier element has comprises a three-dimensional structure.

19. (Currently Amended) Bioreactor according to claim 17, wherein the carrier element includes comprises a textile carrier material.

20. (Currently Amended) Bioreactor according to claim 19, wherein the textile carrier material is surface-treated, and a bio-compatible surface is formed with a structure adapted for ~~an~~ adhesion of the organic material.

21. (Currently Amended) Bioreactor according to claim 17, wherein ~~a receiving device of the flat cell is designed circularly at least one of the two partition wall elements and the carrier element is disposed in a circular void defined in the carrier plates.~~

22. (Currently Amended) Bioreactor according to claim 17, wherein a ~~number~~ plurality of flat cells are arranged ~~as modules in one flow direction~~ in at least one of a parallel and serial fashion.

23. (Currently Amended) Bioreactor according to claim 17, further comprising: a control device ~~by which~~ configured to control at least one of a flow generating device, a temperature adjusting unit, a gasing unit, and a degasing unit, ~~and further supply units can be controlled.~~

24. (Currently Amended) Bioreactor according to claim 23, further comprising: a sensor device ~~arranged in one flow direction after the receiving space, by which connected to the control device and configured to determine at least one of a physical and a chemical values of a state property of the nutrient medium can be determined, and the sensor device is connected to the control device.~~

25. (Currently Amended) Bioreactor according to claim 17, further comprising:

~~a closed housing in which the receiving device is arranged; and~~  
~~at least one feed and one discharge are provided means for feeding and discharging~~  
the nutrient medium ~~as well as an access to the cell; and~~  
means for introducing and removing the organic material from the cell.

26. (Currently Amended) Method for cultivating the organic material, wherein comprising:

~~a nutrient medium is at least temporarily put into a flow,~~  
~~the organic material is introduced into a receiving device of a bioreactor,~~  
~~the nutrient medium is passed through the receiving device of the bioreactor for a convective supply of the organic material, and~~  
~~a bioreactor according to claim 17 is used introducing the organic material to the carrier element of the bioreactor of claim 17; and~~  
passing the nutrient medium between the two partition wall elements to the carrier element.

27. (Currently Amended) Method according to claim 26, wherein prior to an inoculation or introduction of the organic material into the receiving device this is sterilized further comprising:

sterilizing the carrier element prior to introducing the organic material to the carrier element.

28. (Currently Amended) Method according to claim 26, wherein prior to a removal of the cultivated organic material from the receiving device a medium, in particular an enzyme, is introduced for detaching adhered organic material further comprising:  
introducing an enzyme adapted to detach the adhered organic material from the carrier element.

29. (Currently Amended) Method according to claim 26, ~~wherein the direction of flow of the nutrient medium that is passed through the receiving device is changed during cultivation of the organic material further comprising:~~

changing a direction of flow of the nutrient medium through the carrier element during detachment of the organic material from the carrier element.

30. (Currently Amended) Method according to claims 26, ~~wherein at least one of~~ further comprising:

changing one of a chemical and physical state property of the nutrient medium, a stoichiometrical composition, a temperature, a pressure or, and a rate of flow, are specifically changed during the cultivation of the nutrient medium during detachment of the organic material from the carrier element.

31. (Currently Amended) Method according to claim 26, ~~wherein at least after passing the nutrient medium through the receiving device further comprising:~~

measuring at least one of a chemical and a physical values of state property of the nutrient medium are measured;

the measured values of state are recorded and analyzed in a control device, and the measured values of state are employed for analyzing the measured property; and controlling the cultivation detachment of the organic material from the carrier element based on the analyzed property.

32. (Currently Amended) Method according to claim 26, ~~wherein further comprising:~~

passing the nutrient medium is passed through a number of receiving devices, which are multiple cells arranged to each other in at least one of a parallel and serial fashion.